VOL. XII. No. 7. ESTD. JAN. 1923. JULY 1934.

Health

A Journal Devoted to Healthful Living

Edited By Dr. U. Rama Rau & U. Krishna Rau, M.B.B.S.

Published in

ENGLISH, TAMIL, TELUGU AND CANARESE.

Annual Subscription for any edition Rs. 1-8. Foreign Rs. 2. Post paid.

Editorial and Publishing Offices :—323, Thambu Chetty Street, George Town, Madras.

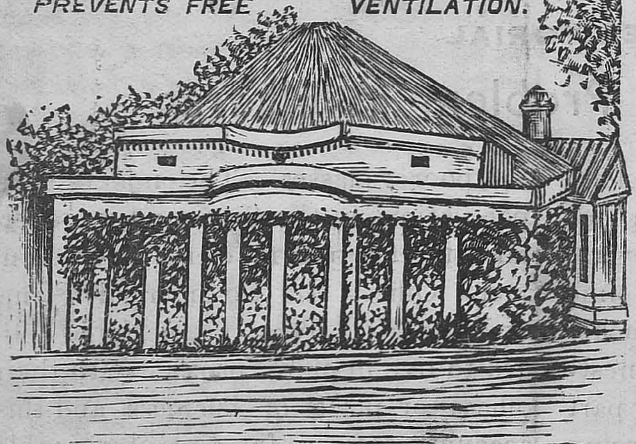
EDITORIAL

The Housing Problem in Madras

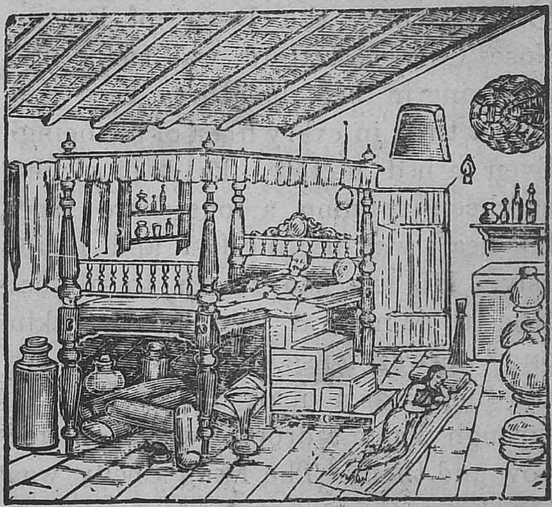
THIS is a very old and vexed problem, a satisfactory solution of which has not yet been reached, though several attempts have been made from time to time by the City Fathers to tackle it in a spirit of sympathy and earnestness. The latest effort on their part is the appointment of a Housing Committee to thrash out the whole problem including the slums and find a way out which will ensure the health, happiness and well-being of the Citizens. Various individuals and associations possessing intimate knowledge of the problem have been consulted by the Committee and a mass of literature has been collected on the subject. Barring the rich and well-to-do, who live in bungalows and garden houses on the outskirts of the City, the people which are most affected through overcrowding and insanitary habitations are the middle and the poorer classes. The middle class population in the City consist generally of petty traders, clerks in Government Offices and Commercial Firms and menials. They are perforce obliged to live in close proximity to their offices or places of business and this accounts mainly for the abominable overcrowding in such localities as Peddunaickpet, Washermenpet, Muthialpet, Chintadripet, Triplicane, Choolai &c. One of the measures adopted by the Corporation to prevent this overcrowding, about the beginning of this century, was to induce the Railway Companies to accelerate their suburban service and thus encourage migration to the suburbs. This was successful to some extent, especially towards the S. I. Railway line, owing to plots being available for house construction at cheap rates in villages close to the railway line and to the

existence of towns such as Saidapet and Cantonments like St. Thomas Mount, and Pallavaram where the middle class people can command some of the amenities and comforts of civic life. But the one great drawback was the low speed of the steam trains, running at snail's speed taking 2 hours to reach 14 miles and the consequent extreme discomfort and waste of precious time. This gave a set back to the movement for some years until the Corporation launched their Mambalam Scheme and the S. I. R., their scheme for the doubling of the line and the electrification of the suburban service. The Mambalam Scheme which was meant as a succour to the middle classes has ultimately been the means of their ruin. Owing to cut-throat competition by the rich, the prices of plots have gone up to fabulous figures and the prices of building materials and labour have become exborbitantly high, so much so the middle classman intending to have a home of his own at Mambalam has become hopelessly involved in debt. These houses have ultimately passed into the hands of the rich who have used them for purposes of profit, by letting them out for tenants. Slowly but surely, Mambalam is getting overcrowded and the Corporation will be faced sooner or later with the same problem of overcrowding which has been confronting them in Madras. The only redeeming feature, however, in Mambalam is that the houses there are mostly of the type called "garden houses" with open spaces all round, which will ensure free ventilation. A good number of the middle class people seeing Mambalam to be too costly and the conveyance offered by the S. I. R. Electric Service too prohibitive (the season ticket fares having been nearly trebled now) have attempted migration towards the M. & S. M. Ry. line and we now find Perambur Villivakam, Ambattur, Tinnanur and other places near the Railway line fast growing into suburban centres. With the electrification of M. & S. M. Ry. service and the opening of more stations to cover up the long distance between one station and another, there is a fair prospect of expansion along this line and further abatement of overcrowding in the City. The Corporation must make a move in the matter, confer with the Railway authorities and see that suburban traffic is extended as far as Chingleput on the S. I. R. and as far as Arkonam on the M. & S. M. Ry., that electrification is introduced in both these lines up to the above limits and that the season ticket fares are reduced by about 25% at least.

CREEPERS ALL ROUND THE HOUSE PREVENTS FREE VENTILATION.



It is only then that the suburban migration of the middle class population will be more popular. Other means of abating overcrowding in the City are the limitation of tenements and the restriction of rents. These are not possible of enforcement until proper outlets are guaranteed for the excess population in the suburbs. Further, the finances of the Corporation will be adversely affected by rent restriction, while the owner of the house, by a fraudulent arrangement with the tenant, may continue to get the old or even higher rents, and thereby defeat their purpose. The shifting of Schools and Colleges from crowded localities which is now being attempted is really a step in the right direction and when the Xian College Buildings at Thambaram are completed and the Pachiappas College removed to Chetpet, overcrowding in George Town will be considerably reduced. To provide cheaper conveyance to suburban residents, the tram service should be extended *via.*, Mount Road to Mambalam and thence back to Kodambakkam, Nungambakkam, Chetpet and Egmore. Another service *via.*, Purasawalkam to Perambur and Villivakkam will not only prove profitable but also convenient, especially to the labouring class. Another method of lessening the evil effects of overcrowding in the City is for the Corporation to conduct a systematic house to house inspection and insist on owners of overcrowded houses to



INSANITARY SLEEPING ROOM.

provide more ventilation to rooms where it is lacking or to demolish all dingy rooms incapable of improvement, to see that flush-out latrines are constructed, that the drainage is perfect and water-supply sufficient. So much about over-crowding and the condition of the middle class population in the City. We shall in the next issue deal with the slums and the labouring class.

Think all you speak ; but speak not all you think :
Thoughts are your own ; your words are so no more.
When Wisdom steers, winds cannot make you sink :
Lips never err, when she does keep the door.—De Laune.

—THE MEDICAL WORLD.

The Greatest Heart Medicine

By

EDWARD PODOLSKY, M.D.,

Brooklyn, New York.

DR. CAWLEY, the Dean of Brazen Nose College, Oxford was sick. He was lying in bed, breathing hard and he felt tired in every fiber of his being. Even in bed he felt like a man who had been running a long, hard race. His heart was beating fast and furiously. His legs had grown to almost twice their natural size and the skin on them was tense and glazed; here and there was a small crack in the skin through which a drop of water exuded now and then. The Dean's belly was big, big with stagnated water accumulated from a sluggishly moving blood stream. It did not require much more than a glance to see that Dr. Cawley was suffering from a failing heart.

The Oxford Dean had many friends among the doctors. They came to his bedside and shook their heads gravely. They bled and sweated him. They purged him with calomel and jalap. They forced squills upon him. They scarified his skin to let the water out. But in spite of all their efforts Dr. Cawley lay in bed, breathing hard, alarmingly hard and filling up with water.

In the hospital at Birmingham one of the junior members of the staff, young Dr. William Withering was gaining some sort of reputation with a new medicine for the dropsy. Dr. Withering had been a physician for not more than eleven years. At times he was more interested in plants than in human beings. He gathered the plants of the countryside on his off hours; he described and classified them according to characteristics. He carefully collected his notes for some day he intended to write a book based on them.

Dr. Withering was particularly anxious to know just what plants and herbs did once they had gotten into the human body. No source of information did he regard as despicable. There was the old woman of Shropshire, for instance, who spent the nights over her kettles, brewing a concoction of twenty herbs with which she had cured cases of dropsy when even the ablest of doctors had failed. After much persuasion, Dr. Withering had obtained a handful of her herbs. He spent many an hour analyzing the weird mixture, and at length came to the conclusion that of the melee of twenty drugs there was but one which was really of any value, foxglove.

The old crone of Shropshire with her wonderful dropsy medicine had impressed Dr. Withering profoundly. He determined to learn all that he could about foxglove. It seemed that not only the old woman of Shropshire knew about foxglove. There was also a man in Warwick who possessed a famous family recipe for dropsy in which foxglove was the chief ingredient. In Yorkshire he learned that it was customary for the inhabitants to

drink quantities of tea brewed from foxglove whenever they had become dropsical.

On one occasion Dr. Withering saw something in Yorkshire which made a deep impression on him. He had been called in to see a tradesman who was vomiting incessantly; his vision had become indistinct, and his heart was beating at an alarmingly slow rate. After a great deal of questioning Dr. Withering learned that the tradesman's wife had stewed a large handful of green foxglove leaves in half a pint of water and had given it to him to drink at one draught. It had ridden him of his dropsy, but it also had brought on a chain of unpleasant symptoms. The observant doctor realized that too much of a good thing was bad.

When Dr. Withering had been called in to treat the Dean of Brazen Nose College he was firmly convinced that foxglove was the one medicine which would help him. He prescribed a solution of the drug which he himself had carefully prepared. With the passing of the hours the medicine began to work wonders. The Dean's face became natural in colour; his heart began to beat slower and in more ordered rhythm. The water left his legs and belly. To the end of his days Dr. Withering prized a letter which he had received from Dr. Cawley's brother who insisted that Dr. Withering with his foxglove had saved the Dean's life on that occasion and had prolonged it for a year.

It was in 1775 that the Dean had been cured with foxglove. Dr. Withering prepared great quantities of the wonderful medicine which he used in all his cases of heart disease. He obtained such wonderful results that his reputation grew by leaps and bounds.

In 1779 Dr. Withering had a phenomenal run of luck. Scarlet Fever was stalking the country side. Not much was known about the disease in those days, and quite frequently it crippled the heart before anything could be done to prevent it. The number of dropsy cases increased greatly. It was customary to treat such cases with squills. Some were helped, but many had relapses. Dr. Withering saw here the opportunity to use his beloved foxglove. It proved to be the one medicine which aided crippled hearts back to recovery. It alone saved many lives which otherwise would have been lost in spite of squills and blood-letting.

It didn't take long before other doctors began to evince an interest in foxglove. Dr. Withering seemed particularly anxious to get Dr. Hope to use foxglove in his cases of heart disease. Dr. Hope was somewhat skeptical, but he would try. The doubting doctor did try, and the success of the trial impressed him so much that he began to proclaim the virtues of this drug to his colleagues. It was Dr. Hope who succeeded in having official recognition given to digitalis as it was now becoming known. In 1783 digitalis made its appearance in the Edinburgh Pharmacopeia.

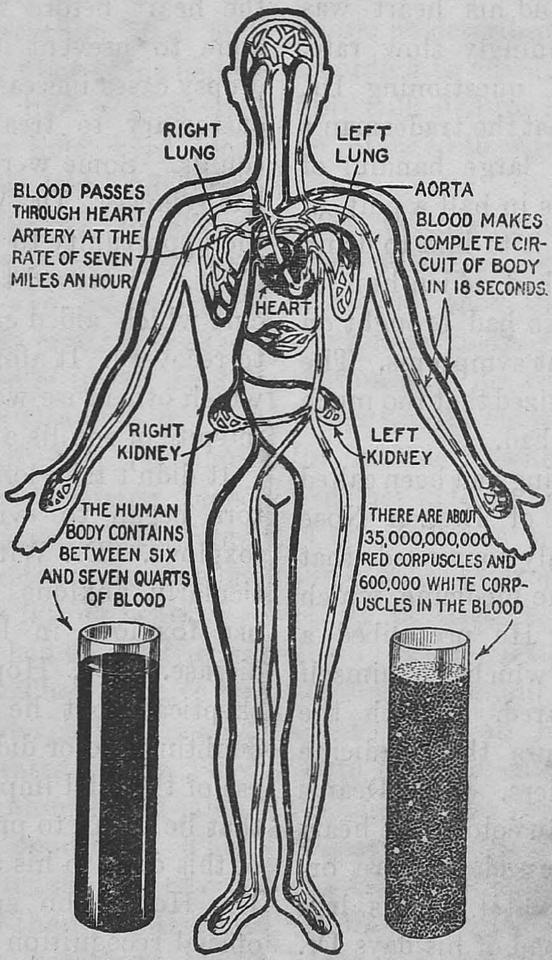
After its official recognition Dr. Withering's foxglove began to find many friends. Among its earliest advocates who did much to popularize it were Drs. Stokes, Duncan and Hamilton. Dr. Stokes read an essay on the virtues of the new drug before the Medical Society at Edinburgh and found

a great many new friends for digitalis. Dr. Duncan and Dr. Hamilton began to use it in all their cases of heart disease at the Hospital in Edinburgh.

In the meantime Dr. Withering was conducting a most searching study on his own cases. From 1775 to 1785 he kept a careful record of his observations. In the latter year he published his book on the drug '*An account of the introduction of foxglove into modern Medicine*'. He had intended to carry out the study longer, but he was forced to publish his account in 1785 because another physician was getting ready to claim credit for himself as having discovered this most remarkable of heart medicines.

The *account* is still one of the classics of medical literature. In that Book Dr. Withering had described all that digitalis could do in heart disease. Modern physicians could hardly improve on his observations. About its action on the heart he said: "It has a power over the motion of the heart to a degree yet unobserved in any other medicine, and this power may be converted to salutary ends."

Dr. Withering knew not only what the drug would do, but most important of all he knew when to stop giving it. His instructions on this point were most explicit: "Let the medicine be continued until it either acts on the kidneys, the stomach, the pulse or the bowels; let it be stopped upon the first appearance of any of these effects."



Is your blood stream properly balanced, as above? If so, you are one of the exceptions

As with so many other great discoveries Dr. Withering had to contend with prejudice and ignorance. Digitalis was not receiving the recognition that he felt was due it. But he harbored hope in his heart; he knew just how valuable digitalis would some day be: "In spite of opinion, prejudice, or error", he said, "time will fix the real value upon this discovery and determine whether I have imposed upon myself and others or have contributed to the benefit of science and mankind."

Time did fix the real value of digitalis. It proved it to be the greatest of all heart medicines. As the years went by interest in this drug grew. The chemists began to take the mysterious drug apart; they wanted to learn just what it was made of. It remained for Dr. Schmideberg, a famous German

chemist, to discover that digitalis consisted of three active principles. These he called digitoxin, digitalin and digitalein.

In spite of brilliant chemical research the real nature of digitalis remained a mystery. Attempts to evaluate its curative ability on a chemical basis did not help much. Other methods had to be tried. This at length led to the introduction of a study of what the drug would do when given to small animals. Among the animals used were rabbits, cats, and guinea pigs. Frogs were also used, but the frog method never became popular, nor was it very accurate.

In 1910 the second great name entered into the history of digitalis, when Dr. Hatcher introduced the cat method of evaluating the effectiveness of the great heart medicine. Dr.Hatcher injected a solution of digitalis directly into the blood stream of a cat and determined just how much of the drug was required to bring the action of the heart to a stand still. By this means he was able to estimate the action of digitalis directly on the mammalian heart (the cat's heart is practically the same as the human heart).

The next great name in the history of digitalis was that of Dr. Eggleston who established the scientific dosage of the drug. One of the most important results of Dr. Eggleston's work was the demonstration of the necessity for using digitalis according to its activity as determined by the cat method of Dr.Hatcher. Dr. Eggleston's study, ten years after Hatcher formulated his cat unit method, also enabled him to determine the amount of digitalis required to produce curing and poisoning effects. Dr. Eggleston devised a method whereby to give digitalis in life saving doses. Hithertofore doctors knew how to give the heart medicine in small doses whereby results did not become manifest in less than four days. This was satisfactory in the mild cases of heart trouble. But there were many cases of severe heart disease which required results in a shorter time. It was Dr. Eggleston who brought mathematics into medicine with life saving results. He found a method of giving digitalis in such doses that results became apparent in a few hours instead of in a few days.

Digitalis was first used to give strength to the failing heart, and to-day it is still the greatest medicine to tide the heart over a crisis. There is not a doctor anywhere in the world who does not agree that digitalis is the best medicine for the failing heart. It makes no difference what the cause of the failure may be, digitalis acts to slow the heart and to cause it to pump more blood per beat.

As the years went by it was found that digitalis was truely a versatile drug as far as curing sick hearts was concerned. Two American physicians, Drs. Gold and Otto found that digitalis was capable of exerting a calming effect on a heart which had acquired crazy rhythm. Digitalis regularized the rate of beat and made the patient more comfortable.

Among the most significant contributions of modern medicine to methods of increasing the effectiveness of digitalis medication have been the introduction of two distinct methods of giving the drug. The first was by

giving the drug by rectum in such cases where it was impossible to give the drug by mouth or by vein. It was Dr. Cleotta who first pointed out that digitalis might be given by rectum with good results. He found that the blood from the inferior middle hemorrhoidal veins leading from the rectum went directly into that great vein the inferior vena cava which communicates directly with the heart. It was therefore quite easy to mend the heart through the rectum!

The second of the modern methods of giving the great heart medicine was by vein. This was particularly indicated when very quick action is desired. The French were particularly interested in the possibilities of the vein method, and it was Dr. Nativelle who offered the first of the very purest forms of digitalis for use by vein. Other physicians soon followed suit and there is now a healthy abundance of intravenous forms of digitalis.

Digitalis has now been a recognized medicine for over one hundred and seventy years. It has grown in stature as the years went by until it attained recognition as the greatest of all heart healers. It has been the means of tiding many a human life through a severe heart crisis. It has truly saved lives and made them more worth while living. It is one of the few drugs which is known and loved by every physician on the face of the earth.

Common Cold

By

DR. M. SANJIVA RAO, M.B., B.S.,

Ear, Nose and Throat Department, General Hospital, Madras.

THERE is no ailment which is more common or more distressing than the "Common Cold" so much so that a large number of superstitions have sprung up regarding its causation and prevention. Here is a short summary as regards its causation and prevention in the hope that it might benefit the readers of the "Health".

1. Cold is infectious.

2. Certain persons are more susceptible to colds than others.

3. Colds are influenced by sudden changes of body temperature.

4. Colds may be caused by irritants.

5. Colds may be caused by local defects or diseases in the air passages.

6. Colds are influenced by diet.

7. Proper care of a Common Cold is the first step in the prevention of some of the most serious and fatal diseases over which we have very little control.

1. Infectious nature of colds is a well established fact, and it spreads from one patient to another by direct contact. Every person suffering from this condition must as a matter of special responsibility to the public see that he does not blow his nose and sneeze in the close proximity of others, or spit indiscriminately inside houses, theatres, on the road or at public places. The handkerchief must

be put to its legitimate use of receiving all secretions of the mouth, nose and throat. Little children are the worst sufferers, as they are often indiscriminately kissed and fondled by all manner of persons.

2. Other things being equal, the man with sedentary habits, who sits all day in ill-ventilated rooms, inhaling the foul stagnant atmosphere is more liable to catch a cold, than the active out-door worker, breathing fresh air. Therefore it is imperative that everyone should make it a point to find enough time to ventilate himself in the fresh air every-day, by active exercise in the open. Children who are ill-nourished and debilitated are more prone to it than healthy children living in well-ventilated houses and in the open air.

3. Sudden chilling of the body also predisposes to cold by flooding and congesting the delicate respiratory tissues with blood driven from the chilled skin. Thus you often find people attacked with cold, after coming out of a crowded theatre at night into the chill night atmosphere, or taking a cold bath immediately after heavy exercise, or being in the open verandah, or under a punkah after a hot oil bath etc. Children who are heavily clothed and always kept indoors in ill-ventilated rooms are susceptible to cold if they are exposed outside. The best method of prevention under these circumstances is by proper acclimatisation. We must accustom infants from birth to these changes of temperature, by discarding all unnecessary heavy clothing (which is quite unnecessary in this tropical climate), by accustoming then to tepid or cold water baths, and by making them lie in the open with the body lightly covered. These things must be observed from early infancy, and over clothing scrupulously avoided.

4. Snuff and other irritants merely keep up the cold and tend to make it more chronic instead of relieving it as commonly supposed. The apparent relief is due simply to the increased watery secretion caused by the irritants, and the consequent temporary decongestion. Snuff and other irritants must always be avoided.

5. Local defects in the air passages such as bad teeth, septic tonsils, adenoids, defects in the nasal passages and bones are often responsible for recurrent colds and also keeping them up as chronic. These conditions must always be promptly attended to by a doctor and the defects remedied.

6. Diet, especially in children, is a very important factor. Deficiency of proteins and vitamins is a predisposing cause. Proper supply of vitamins as butter, fresh fruit juice, cod-liver oil etc., will prevent many attacks of cold. Rickety children are always susceptible to chronic cold.

7. It must be remembered that a common cold is a potential danger to the sufferer himself, and if neglected might lead to fatal complications like pneumonia or broncho-pneumonia, especially in children. Recurrent cold always denotes an inherent defect in the system, which should always be promptly attended to before it becomes a serious complication. Cold must be promptly treated as any other infectious disease, by complete rest, keeping the bowels opened and putting the patient on light diet. Proper treatment will always cut short the course and the severity of the disease.

Positive - Health

What has Tiruvalluvar (the Tamil Poet and Saint) to say?

By

L. KAMESVARAN, B. SC.,

Annamalainagar.

ALL those wrong habits that are the cause of human misery and other states of body called disease, can be included in one word civilization. The problem of keeping fit or the right methods of ensuring to oneself health, happiness and longevity, do not interest the civilized man. It is only when he falls sick that he goes to consult a professional healer, but even then not to learn the true cause of disease, and to make amends for the physiological sins he had committed, by way of fasting and patiently enduring the pain, but only to get immediate relief by any means right or wrong, and to continue in his accustomed ways of living. He thinks that health is an inexhaustible possession and a sign of health is only a negation of illness.

Popular notions about health are far from right. People confound health with longevity. Of course a healthy man can live long, but the contrary that a man who lives long, is healthy, need not be true. For there are persons suffering from asthma and other chronic diseases who are long-lived, but do not enjoy life. Again they confound health with muscular strength and an ability to eat sumptuous meals without any immediate evil effects.

Positive-health is a harmony of the whole man—of body, mind and spirit. Mental health is more vital than bodily health. Spiritual health is the most vital of all. Bodily health is not simply a negation of disease but it is something real and positive—having its root in mind and spirit. But it should not be supposed that health is a sufficient insurance against all kinds of disease. Health (power of resistance) may co-exist with disease or it may be absent when there is apparently no disease at all. Acute diseases are possible to a healthy man but these when treated naturally, will bring better health.

Health shows itself in beauty of face and figure. A sign of health is lightness of body, with ease of movement. A healthy man is not only strong and long-lived but also of a happy temper of mind.

The means of positive-health is the recognition of and obedience to the Power behind Life and to its laws that is, to the laws of natural living. The fundamental part of natural living is Right eating or Dietetic Righteousness. Disease is but the active manifestation of the curses of the much abused organ—the stomach. Bhagavan Sri Ramana of Tiruvannamalai has expressed the woes of the stomach in a pithy tamil verse. It is :—
" For even one half hour, you will not let me rest ; nor will you, for one half hour, in a day, forego eating,

never do you consider the afflictions I—your stomach—have to bear in your service; it is passing hard indeed, oh tyrannical man, to get on with you!" The stomach is the seat of the Lord and He is the Eater. For the Gita says:—

"I myself have become the Vital Fire in the bodies of living beings, and through the agency of Prana and Apana digest the four-fold food." Thus obedience to this power consists in eating according to His will which is indicated to us through Hunger.

Tiruvalluvar, the author of an ancient holy Tamil work called 'Kural' devotes a chapter to Dietetic Righteousness. The second verse in the chapter is:—

'மருந்தென வேண்டாவாம் யாக்கைக் கருந்திய
தற்றது போற்றி யுணின்.'

He requires no medicine who eats only after assuring himself that what he has already eaten, has been fully digested and eliminated from the body. That is, one should eat after remaining hungry for a few hours. This is suggested by the word 'போற்றி'. Hunger takes sometime to mature and become keen and effective as digestive power.

The commentator on this work (Parimelazhagar) gives the stages in the maturing of hunger as follows:— யாக்கைநொய்மை, தேக்கின் தூய்மை, கரணங்கள் தொழிலுக்குரியவாதல், பசி மிகுதல், that is, lightness of body, clean wind, enhanced capacity of the organs for work and mature hunger. The stomach which is like an elastic bag, stretches far beyond its natural size, at the end of the principal meal of the day. It empties itself only by degrees and during the process of digestion winds (gas) tainted with the smell of the food eaten may be sent up. When all the food has been digested and eliminated from the body the stomach shrinks gradually and then winds come up. These winds have no smell. They are called *'clean winds'*. When a few of such winds have come and gone, a good deal of the foreign matter would have been eliminated from the body and the body would have become very light. The mind would then be very alert. All the vital energy is at the disposal of the man, hence is the enhanced capacity of the organs for work. That is why our ancients did their prayers, meditation and other high-grade work either literary or artistic, while hungry or on a quite or nearly empty stomach. One of the special commandments given to a newly initiated brahmachari, is 'do they work drinking water alone'. The reason for this is that work is best and most quickly done (without any evil consequence to the body) only when there is no competition between work and digestion. Work, whether digestive, muscular or intellectual, involves expenditure of vital energy and digestion is the hardest labour. When intellectual or muscular work is done upon a loaded stomach, energy is being shared between the two or the whole of it is being appropriated by the brain or digestive system according to the degree of concentration of the man in the work. The result is that this has a throttling effect upon digestion and the work done is poor in quality. Hence it is an important law of Nature, that all work should be done before eating. The present system of doing work in schools, colleges and offices, is a violation of this law. This viola-

tion we can see, is being punished by loss of health and meagre progress in work.

The common notions of hunger and its signs are quite incorrect. People think that faintness, fatigue, pinching feelings and the like are signs of hunger, since taking of food gives temporary relief from these ills. These are due to shutting off of vital currents through the circulation of food-poisons in the blood. These symptoms can be relieved in a natural way by a cold bath, by resting or by sips of cold water. It is wrong to suppose that hunger is associated with feelings of sickness or weakness.

The next important rule in Dietetic Righteousness, is in regard to the quantity of food to be eaten. Tiruvalluvar gives the answer in the next verse :—

'அற்றா லளவறிந் துண்க வஃதுடம்பு
பெற்றா னெடிதுய்க்கு மாறு'.

He says that one after getting and cherishing hunger, should eat moderately. This is the way to prolong one's embodied life. People may ask what does it matter whether one lives long or dies soon? But it should be realised that man here has not only to eat, marry and beget, earning enough to enjoy sense-pleasures. Man occupies the highest rung in the ladder of the animal kingdom. He has got a mission in life. It takes at least some thirty years for one to attain a correct balance of his motives and purposes and powers for their fulfilment. People of a higher order generally discover their real vocation only late in life. The period following the maturity and clarity of purpose is the operative part of one's life and it would be a great loss to the evolving soul, if the body should perish before this period of consummation.

'மாறுபா டில்லாத வுண்டிமறுத் துண்ணி
ணூறுபா டில்லை யுயிர்க்கு'.

This verse lays down the next rule namely that one should eat, when hungry, that food which is not unsuitable, that is, food that does not kill, but builds the body out of good flesh and blood. The word 'மறுத்து' suggests that one should eat less than the quantity that the digestive power can completely digest, that is, one should exercise self-control. There will then be no misery through disease.

There are three grades of men mentioned by this author—the abstemious the middling, the gluttonous.

'இழிவறிந் துண்பான் கணின்பம்போ னிற்குங்
கழிபே ரிரையான்க ணோய்'

He who eats the bare minimum of the vital need, is the abstemious eater and he is rewarded with the highest grade of happiness. He is ever cheerful and contented. He does not hunt feverishly after pleasures of sense. Pleasure comes to him now and then by the satisfaction of natural needs. It comes to him unsought. He does not look upon pleasure as the end in life but as a bye-product of life. He is strong both physically and mentally. Even suffering is light to him. It is only the weak that really suffers. Hence Milton was right when he said, "To be weak is miserable doing or suffering." The lot of the glutton is the worst; disease and misery are his lot in life.

'தீயளவன்றித் தெரியான் பெரிதுண்ணி
ணோயளவின்றிப் படும்'.

Here he contrasts the middling with the glutton. He who eats immoderately and indiscriminately ignoring the

degree of his digestive power, will be afflicted by numerous diseases. But he who eats nearly all he can safely eat, up to the limit of his digestive power, but is careful not to eat more, is the middling. The middling will be following the Epicurian philosophy namely 'eat and be merry'. This man is deprived of the highest grade of happiness and he seeks to compensate it by sense-pleasures. He is constantly pursued by the fear of excess. He is disease-free and enjoys life so long as he is prudent.

Thus Tiruvalluvar in a few stanzas, has dealt with the most important part of Dietetic Righteousness. The essence of his teachings is, as Purinton says, "the secret of being always healthy, holy and happy, is to be a little hungry most of the time"

Prunes as a Food

On analysis, the average prune shows just under 1% of protein, about 17% carbohydrates and 7% mineral matter. The chief mineral elements which it contains are potassium, sodium, calcium, magnesium, phosphorus, sulphur and silicon as well as smaller quantities of iron and chlorine. The acids in prunes include malic, tartaric, citric, boric and benzoic. The quantities, however, are only small and the benzoic acid is combined in the kidneys with glycin (an amino acid) and eliminated in the urine as hippuric acid. The alkaline value of the fruit is not diminished in consequence of the traces of these acids.

The value of prunes as a food is due to their high content of readily absorbed fruit sugar, to their laxative properties and to the wide range of important mineral salts which they contain.

One of the best methods of preparing prunes for the table is to soak them in water (without shop sugar) for some time. They will be found to be very palatable and sweet without any cooking whatever:—" O. D."

Oranges for Influenza

Influenza according to Mr. C. Granell, in an article on "Influenza and the Orange", in Helios, "is a result of the denaturalization and disintegration of food cooked by fire".

The most effective weapon to combat this is the orange. The orange tree is never deprived of its leaves which remain in activity throughout the year, making vegetal material and storing-up the solar energies.

Unlike grapes, plums, apples, strawberries &c. which require but a few months to form and ripen, the orange requires a year to come to maturity.

The ordinary ration for a person who uses cooked food is from four to six daily. An orange on rising in the morning and another at midday is an excellent aid to health, disinfecting the digestive organs and permitting a better assimilation of cooked foods. For supper, two oranges cut into slices, with a little olive oil, a small spoonful of honey, all well mixed, and a French roll, is an excellent means of promoting sound and refreshing sleep. The main thing is to strengthen the defences of the body by simple and natural foods and especially by fresh green vegetables and fruits such as the orange:—" O. D."

A New Vaccine against Smallpox

A NEW and inexpensive preparation known as "chick" vaccine, which is cheaply and easily grown in eggs, will probably soon take the place of the "calf" or bovine vaccine now in common use.

Vaccination prevents small-pox by substituting a very circumscribed small-pox infection for one involving the whole body. Passing the virus through the system of a calf, it is rendered less virulent, so that the infection instead of extending throughout the entire body, causing a general eruption and formation of pustules, is confined to the area immediately surrounding the point at which the vaccine has been introduced.

While the bacteria which cause the disease are confined to this limited area, however, the specific poison which they produce, which gives rise to the formation of antibodies, thus causing immunity, or protection against a second attack of the disease, is absorbed into the blood stream and so distributed through the body; and thus the same protection is afforded as though the vaccinated individual had suffered an attack of small-pox.

Jenner's discovery has been the means of saving many thousands of lives and has made possible the almost complete extinction of small-pox. There is, in fact, every reason to believe that in time this disease, once a most deadly scourge, will ultimately disappear, along with diphtheria, scarlet fever, and typhoid fever, maladies against which modern medical science has provided efficient remedies, the thorough application of which is the only necessary requisite for their complete mastering.

Formerly, what was known as arm-to-arm vaccination was practised. By this method, every vaccinated person was infected by streptococci and staphylococci, pus-forming germs, as well as by the small-pox virus, and not infrequently the results of vaccination were very serious. General infection and even death sometimes occurred. Cases were, in fact, reported in which syphilis and other blood infections were communicated through vaccination.

These untoward happenings naturally gave rise to intense opposition to vaccination. In recent years, however, this has almost entirely disappeared because of the general introduction of bovine virus, or vaccine obtained by the inoculation of a calf. The refined methods now in use afford almost perfect security against undesirable infections. They have the disadvantage, however, that they are necessarily very expensive because of the great difficulty in preventing contamination of the vaccine.

The new discovery recently reported at a meeting of the Society of American Bacteriologists by experts from the medical department of Vanderbilt University promises to overcome this difficulty by the cultivation of vaccine virus in eggs. Instead of vaccinating a calf, the vaccine is introduced into an egg by careful puncturing in such a way as to avoid the possibility of contamination.

The small-pox virus appears to develop in the contents of the egg as well as in the tissues of the calf and, after having passed through one hundred and fifty generations by inoculation from egg to egg, appears to retain its original activity, although this "chick" vaccine is somewhat milder than calf vaccine.

That the new vaccine is effective is shown by the fact that ordinary vaccine does not "take" in persons who have been vaccinated by it. Whether chick vaccine will prove to be as durable as vaccination with bovine virus, can be determined of course only after the lapse of years. Observations have begun, however, which in due time will settle the question.

This new method has the great advantage that it wholly eliminates danger of contamination and simplifies the production of vaccine to such a degree that the cost of production will be enormously reduced.

By the inoculation of three dozen eggs, the bacteriologists may in four days produce enough vaccine to vaccinate more than seven thousand persons.—*Good Health, U. S. A.*

The Virtues of Goats' Milk

By

I. T. Bleloch

Many people have a certain amount of prejudice against the goat, chiefly on the ground of cleanliness. And yet goats are naturally clean animals, and can be kept so. Under the worst conditions, however, goats' milk may be actually safer to drink than that of cows.

One of the great factors in favour of goats' milk is that the goat is almost immune from the tubercle germ. Her milk can therefore be drunk with safety, without being pasteurized or sterilized, which tends to destroy the vitamins. Professor Nocard, an eminent French research worker, states that out of 130,000 goats brought to Paris for slaughter, meat inspectors failed to find a single case of tuberculosis ; in Prussia, out of over 47,000 goats, only 0.41 per cent were found to be suffering from tuberculosis. Goats are universally submitted to the tuberculin test in Prussia, and on an average only 0.5 per cent give a positive reaction for tuberculosis.

An experiment has recently been carried out which showed the superior value of goats' milk for infants. A group of kids were fed on goats' milk, and another group on cows' milk. The kids were killed at the end of the experimental period, and the ends of the bones were microscopically examined. The bones of the kids fed on cows' milk showed changes due to rickets ; while the bones of the kids fed on goats' milk showed no signs of disease. Similarly in the case of guinea pigs, those fed on goats' milk thrived, while those exclusively fed on cows' milk showed evidence of malnutrition, and some died. Certain forms of infantile eczema and dermatitis have been succ-

essfully treated by substituting goats' milk for cows' milk; and the Cow and Gate Company, of Guildford, manufacture goats' milk in powder form under the name of "Caprolac" expressly for this purpose. Numerous cases can be quoted in which the use of goats' milk has been of outstanding value both to infants and older persons.

Goats' milk contains a fair proportion of iron, which should render it particularly beneficial in cases of anæmia.

Apart from the question of actual disease, goats' milk has a very strong point in its favour on account of its remarkable digestibility. Owing to the small size of the fat globules, and the soluble nature of the curd—as opposed to cows' milk which curdles in dense masses—it is particularly suitable for delicate children and people with weak digestions. It digests in a fraction of the time required for cows' milk.

Neither the female goat, nor its milk, has an odour when properly looked after, but the milk rapidly acquires the odour of anything near to it, in the same way as does cows' milk. It should be cooled off as soon as possible, for this reason. Provided cleanliness is observed both as regards the goat herself, and the milk vessels, goats' milk keeps better than cows' milk, especially in hot weather. Cows' milk is often produced under very dirty conditions, and cows are not usually washed before milking—a precaution that the goat-owner can easily take.

The average composition of goats' milk compared with cows' milk and human milk is shown in the following table. It will be seen that the protein content of goats' milk is more than in cows' milk, and actually twice that of human milk. Goats' milk also contains three times the proportion of mineral salts as human milk, and twice as much as cows' milk. A goat produces twice as much milk in proportion to its body weight as a cow, the average yield being about four pints per day. It is true that a goat also eats more in proportion to its weight than a cow, but it is satisfied with cheaper food, and the milk actually contains less water and more food material than that of the cow.

Comparison of Three Different Types of Milk

		Goats	Cow	Human
Water	...	86.45	87.40	86·40
Dry Substance	...	.85	.75	.90
Casien	...	3.00	3.00	1.00
Albumin	. .	1.00	.40	1.20
Fat	...	4.20	3.75	3.50
Sugar	...	4.50	4.70	7.00

There is therefore a strong case for the more extensive use of goats' milk for children and general family use. —*Good Health* (*London*).

Health Tit-Bits

Birth Control.—No one questions the importance of birth control. The trouble is, no one has yet suggested any artificial means by which desirable "control" may be accomplished. Too many undesirable and unwanted babies are being born and too few desirable ones. If birth control has any field of usefulness whatever, it is to curtail the hordes of half-wit and criminally pre-destinated babies that are swarming into the world. But it is equally important to secure an increase in the number of infants likely to become useful and distinguished citizens.

Thus far birth control methods have done nothing of consequence to stop the increase of undesirables, and there is no likelihood that it ever will show any better results, if for no other reason because of lack of interest and co-operation on the part of those whose reproductive activity needs most to be controlled. So far as its influence on the reproduction of desirables is concerned, it has been detrimental if anything. From a recent most sensible editorial on the subject by the able editor of the *Journal of the American Medical Association,* we quote the following: —

"The biologic method of contraception, popularly known as the 'safe period,' has been more or less generally discussed in newspapers and periodicals and is apparently the one technic short of complete abstinence that has thus far been free from criticism on religious and social grounds. From the point of view of medicine, psychology and esthetics, there have been fairly well sustained criticisms against all the technics thus far made available in various scientific works on the subject.

"Women with menstrual cycles approximating the four weekly type are not likely to conceive following exposures during a period up to eight days after menstruation begins and in the ten days preceding menstruation. To state the matter conversely, the maximum likelihood of conception is the period from the eighth or tenth to the eighteenth or twentieth day of the menstrual cycle, with the maximum at about the twelfth to the fourteenth days.

"Thus there is being developed scientific evidence to warrant the possibility that this method for the prevention of conception or birth control is sufficiently accurate to be dependable and at the same time psychologically, socially and esthetically sound. It calls obviously for a certain amount of civilized restraint.

"It would seem to be desirable that large clinics especially interested in studying the prevention of conception might concentrate their efforts temporarily on a study of this method from all the different points of view that have been mentioned. The possibilities seem more promising than promoting the sale of various mechanical devices, chemical substances and other forms of intricate manipulation which have not met any of the critical criterions that have been mentioned. The newer observations do not signify

complete triumph. They do indicate the value of biologic and medical research and the necessity for further scientific study."—*Good Health, U. S. A.*

* * *

Formula for a Normal Daily Diet.—By H. C. Menkel, M.D.—We shall list in terms of definite foods the articles necessary in building a normal diet for each day. These comprehend the various food factors in the proportion which nutritional research has shown to be essential to life, growth, health and reproduction.

The selections are based on normal health requirements, with the recognition that in abnormal health there will need to be modifications accordingly.

The normally healthy person should have the following food articles to supply his daily food requirements dividing them into two or three meals as desired.

These foods should as far as possible not be too greatly altered from their natural state by over-cooking.

One half to one seer of milk;

One kind of fresh ripe uncooked seasonable fruit;

One kind of uncooked fresh green leafy vegetable;

Two water cooked, preferably steamed, green leafy vegetables;

One cooked tuber vegetable. Dal or nuts may be substituted.

One or two slices bread made of unsifted ata flour, or two chapatis of the same.

Usual serving of butter with bread.

In addition to the above, select one (and one serving only) of any one of the following complete protein foods according to individual preference or religious custom.

Curd of milk, cheese, eggs, (and for non-vegetarians) fish, fowl, meat.

Drinking water, an average of four glasses preferably between meals.—*The Oriental Watchman.*

* * *

The Twins. — Fifty famous doctors, psychologists, and educators gathered together recently to watch twin babies nineteen months old. Johnny and Jimmy were the sons of a taxi driver and from the time they were twenty days old they were under the supervision of an expert psychologist. Johnny was given, from the first month, a thorough course of training. He was helped and encouraged and urged to do things. When he was eight months old he was taught to swim. At this demonstration, he crawled up a steep slide which made his brother cry with fear. He jumped off a block five feet high into a nurse's arms, and even dropped off it by himself. He roller-skated around the room, laughing when he fell down, and picking himself up again. Jimmy was left to himself like any ordinary baby and was given no special teaching. Most of the experts at this demonstration believed that it gives a clue to the possible improvement of the human race. By intensive training a child's level of skill, achievement and personality may be raised so that perhaps, as he grows up, he will face the problems of life in the same competent way.—*The Treasure Chest.*

* * *

Green Colour Prevents Rancidity.--A chemist in the United States Department of Agriculture has made the interesting discovery that the rancidity which develops in many foodstuffs, especially those containing oil, is due to the action of light. Not all light rays are harmful, for green and black seem to

be protective, or at least to greatly delay the appearance of rancidity. In tests made with all the different prismatic colours, it was found that corn meal, rice bran, and other substances which easily become rancid, kept well when protected by either black or grass green wrappers. Bluish or yellowish green was not protective.—*Good Health* (*U. S. A.*)

* * *

Combating the Mosquito pest.—French Scientist's Invention,—Bombay has been taught a new way of waging war against mosquitoes and other pestiferous insects. Experiments to fight insect danger have been carried out in Europe for a long time now by means of an invention of a Frenchman, M. Menasche, who is now in Bombay. M. Menasche has been carrying out a number of experiments assisted by the Bombay Health Department, who are taking the keenest interest.

The machines M. Menasche uses in his experiments are fitted with lamps utilising mercury vapour and emit curiously bluish rays; they can only be employed at night or in the dark. The rays emitted by the lamps have the peculiar property of attracting insects of all kinds, which, within a certain range of the machines, are suddenly drawn into containers with gauzes, by means of suction caused by an electric fan arrangement. In one of his experiments, M. Menasche used three machines with lamps of different designs and sizes with the necessary adjustment to the electric current, each machine being kept a few yards away of each other. At the close of the experiment it was found that while the container of one machine had collected only mosquitoes, the other only beetles and moths; the third had collected both beetles of smaller size and mosquitoes.

M. Menasche, who is on a tour of countries infested with pestiferous insects will be carrying on his research work in other parts of India, on his way to Siam, where he will be conducting special experiments on a species of insects which cause pernicious anaemia among cattle.—*The Hindu.*

* * *

The Struggle against Prostitution and Venereal Disease.—Adolf Hitler, Mitt. d. deutsch, Gesellsch. z. Bekampf. d. Geschlechskr., Berlin, 1933, XXXI, 74. This is an extract from Hitler's book Mein Kampf. Hitler emphasizes the absolute necessity of controlling venereal disease, and says that the neccssary condition for accomplishing this is to abolish prostitution. This involves radical changes in economic conditions and the overcoming of old preconceived ideas and prejudices. Economic conditions must be brought about under which it will be possible for young people to marry early, as late marriage is one of the chief causes of prostitution. The whole of our life, including sexual life, has been commercialized. The whole question of the sexual relation must be restored to a higher plane, and the entire nation awakened to an understanding of the importance of family life and the danger of venereal disease and prostitution.

Changes must also be made in the educational system. Too much attention has been paid to purely intellectual development and too little to physical development. Healthy physical exercise and sports help to control the physical impulses which are unduly stimulated by erotic books and moving pictures. Erotic literature, art, and theatrical performances should be controlled, for personal liberty is a secondary consideration as compared with the preservation of the race.

The struggle against syphilis and prostitution is one of the most difficult tasks of the race, because it is not a

simple problem but involves a whole series of questions, moral, social and economic. Punishing the individual prostitute has accomplished and will accomplish very little. It is the psychic prostitution of the entire people that must be cured. (F. S. P.) —*National Health Review.*

* * *

Mussolini Sets a Good Example.—The great increase in the mortality from pneumonia, heart disease and certain other grave disorders during the winter months, is due more to the overheating to which millions of people subject themselves than to the cold weather, though the latter is, of course, the occasion for the artificial heating. Except in aged people and persons enfeebled by disease, most cold weather diseases would disappear if persons living in a region which enjoys cold weather during the winter months would take care to harden themselves by graduated contacts with cold air, instead of shutting themselves up in overheated rooms, thus lowering their resistance, and especially resistance to temperatures below those to which they are accustomed. It is not at all a difficult matter to harden the body so as to greatly increase its ability to resist cold.

Mussolini has taken to Skiing. He is setting the Italian people a good example by spending the week-end in the mountains, where he mingles with multitudes of his fellow countrymen, who, following his example, are carried to the mountains on special trains in great numbers for week-end participation in the winter sports of various sorts, the purpose being to gain strength by strenuous exercise and increased resistance by contact with cold.

Dwellers in temperate zones, which are blessed with a cold season, who make good use of their opportunity for cultivating hardihood, are far more vigorous than dwellers in tropical countries. It is for this reason, doubtless, that the people who live in regions that have a cold season are the dominant nations of the world.—*Good Health* (*U. S. A.*)

* * *

Foods Which Cause Asthma.—It is well known that persons suffering from asthma are often sensitized to common articles of food and to numerous other substances with which they are in contact. Attacks of asthma from this cause may occur in children three years of age or even younger.

In a recent invastigation by Dr. Robert Cooke, the following substances were found to be the cause of the asthmatic attacks in the number of cases indicated out of ninety-four cases in all, more than one substance being found active in many cases: house dust, fifty-five cases; ragweed, twenty-one cases; feather, nineteen cases; animal epithelia, twelve cases; grass pollen, six cases; orris root, five cases; cotton-seed, one case, and kapok, one case.

In forty-five cases sensitized to foods the following substances were involved with the frequency indicated: egg white, thirteen cases; chicken, eight cases; cereal, twelve cases; milk, ten cases; fish, ten cases; beef, eight cases; nuts, seven cases; cinnamon, one case; pea, four cases; spinach, one case; shad roe, one case; celery, one case; cauliflower, one case; potato, two cases; chocolate, one case; mustard, two cases; orange, one case.—*Good Health* (*U. S. A.*)